

New York will be able to sign up for Internet service to track stock prices for her portfolio.

A doctor in a remote town can have immediate access to communications infrastructure that will allow him to transmit x-rays and live video feeds of his sick patient during a teleconference with a team of specialists in Los Angeles, and can be guided in conducting a complex operation, as if the L.A. doctors were in the room peering right over his shoulders.

As another an example, small rural colleges would gain access to communications channels that will allow them to participate live in lectures being conducted at larger universities around the country. And teachers in local high schools in hard-to-reach areas will be able to disseminate assignments, reading materials, and interactive multimedia presentations to those students who cannot make the tough journey, and to other students during storms or other weather conditions that make traveling to school impossible.

This technology will also be available to all users -- in all locations and with the same quality of service -- from day one of a satellite system's operation. Once the satellites of a SkyBridge-type system are in orbit, they provide immediate global coverage -- and will provide services that are just as accessible in a remote area with one user, as in an urban metropolis with over a million users. Unlike a terrestrial system, in other words, we are not talking here of an incremental buildout over many years, but rather of "instant infrastructure" for everyone from the outset.

There are thus a vast range of benefits that global satellite technology will bring to all areas of this country and the rest of the world. And these benefits can be brought about without replacing the existing wire-based infrastructure. Indeed, SkyBridge and other similar systems can only work as an extension of the public telephone system. SkyBridge will be entirely dependent upon national and international fiber optic back-bone networks. These satellite systems will create access to the network for geographic areas not reached by it today, and simply provide "last-mile" connectivity to remote locations, thus preserving the huge financial investments that have already been made in existing terrestrial networks.

I truly believe that satellite technology promises to make the next century one in which the information superhighway can become more than just a concept or an ideal. Instead, it will be made into reality for the millions of Americans living in rural, high-cost, hard-to-reach, sparsely populated, and geographically unfriendly areas, all of whom will realize enormous economic, quality-of-life, and educational benefits from equal access to infrastructure for advanced communication. Rather than feeling pressured to migrate to the cities to participate in the information revolution, these citizens will suddenly have access to services unimaginable just a few years ago.

## **II. Promotion of Competition and Universal Service**

Not only will global satellite telecommunications technology improve the well-being of all citizens and increase the success of businesses; such technologies will also go a long way in fostering full-blown competition in the local and long distance telephone markets in the United States, and with respect to the U.S. portion of the Internet

backbone. Such technology will also help bring about universal service, as dictated by the Telecommunications Act of 1996.

At the heart of the far-reaching '96 Act was the fundamental objective of promoting competitive telecommunications services in the United States. The '96 Act promised to usher in a world of competitive local and long-distance offerings, as well as universal service. Unfortunately, establishing competition has proven more difficult than expected in an industry where, in most geographic areas, one monopoly owns almost all of the wires going into the homes and businesses. The conventional wisdom these days appears to be that the '96 Act is failing.

But the Act need not fail. With respect to local competition, global satellite technology promises an ideal alternative to the traditional "last mile" of the local loop. By creating instant bandwidth that is easily accessible from any point on the globe, while still being connected to the public switched network, a satellite network can help to infuse competition by transmitting local voice and data communications from any home to the facilities of any local exchange carrier, incumbent or competitor alike. By breaking down the barrier to competition caused by the bottle-neck at the "last mile" of the local loop, satellite technology can help achieve the '96 Act's competition ideal.

Similarly, with regard to universal service, satellite technology is perhaps the most workable, soon-to-be-available way to turn universal service into a reality. Regardless of the amount of money contributed to the Universal Service Fund -- and by whom -- it is unlikely that these subsidies alone will make it feasible for carriers to provide the sorts of high speed, broadband services to certain remote, high-cost areas that are

necessary for the residents of those areas to become full participants in the Information Age. A global satellite network can overcome inherent limitations of terrain and distance without additional infrastructure costs, thus making it possible to have service that is truly "universal."

### **III. A Final Observation - Spectrum Efficiency**

As the members of this Subcommittee know better than most, the radio-frequency spectrum is a resource limited by the laws of physics. It is this resource that enables satellite systems to bridge the gaps in the terrestrial infrastructure. Given the large number of different types of services and entities vying to use this resource -- microwave, paging, cellular, DTH TV, you name it -- it is necessary for the government to administer this asset in a manner that benefits all segments of the public. SkyBridge, in an effort to maximize the efficiency with which this scarce resource is used, has proposed an efficient and non-interfering protocol for sharing portions of the frequency spectrum already being used for other services. This proposal represents a forward-looking attempt by one company to use technological innovation to provide global access to advanced informational services, while assuring full continuity of all existing services.

Government support for such technological advancements will help to take us full-speed into the 21st century, and will bring about an information superhighway with the potential for entrance and exit ramps into virtually every house, cottage, hut, igloo, tent, business, school, college, hospital, clinic, government office or other structure in the United States and on the rest of planet. This Congress has already recognized the great importance of advanced telecommunications technology for the creation of broadband

communications infrastructure. In Section 706 of the Telecommunications Act of 1996, Congress directed the FCC to take steps during this year to "accelerate deployment" "to all Americans" of "high speed, switched, broadband telecommunications capability that enables users to originate and receive high quality voice, data, graphics, and video telecommunications using any technology." SkyBridge stands ready to help fulfill this mandate.

### **Conclusion**

The changes taking place in the telecommunications industry are nothing short of breathtaking. Likewise, in an equally exciting but less visible way, the satellite industry is going through a radical transformation. Creating the best legal and regulatory environment to favor these simultaneous developments will not be easy. But satellite companies can and will make an enormous contribution to achieving the ideals of competition, universal service, and spectrum efficiency. We will create the expanded bandwidth, higher quality, readily and universally available communications channels being demanded by businesses and individuals. By using innovative satellite technologies such as that being developed by SkyBridge, our companies will provide instant global bandwidth for advanced communications, thus making the information superhighway accessible not just to major urban areas, but to all locations in all parts of this country and the rest of the world.